ILED® Lyra
Marine Light 3 NM / 5NM U-code, Obstruction Light

User Manual

Contents

1. Safety ... 3
2. Warranty ... 3
2.1 General ... 3
2.2 Life span ... 3
3. Type plate ... 4
4. Product Description ... 6
5. Specifications ... 7
5.1 General ... 7
5.2 Dimensions ... 7
6. Installation ... 8
6.1 Preparation ... 8
6.2 Assembly ... 8
6.3 Connections ... 9
7. Use ... 10
7.1 Commissioning ... 10
7.2 Switches and Controls ... 10
7.3 Insulation test ... 10
8. Maintenance ... 10
9. Recycling ... 10
10. Contact details ... 10
11. EU Declaration of Conformity ... 11

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1. Safety

To ensure that the product is used safely and to optimize its life time, the following instructions must be observed

- The user shall ensure that dust layers in excess of 5 mm should not accumulate on the surface of the enclosure.
- The user shall ensure cable entry devices are suitably certified Ex e IIC Gb and Ex t IIIC Db, are suitable for the ambient temperature range and maintain a minimum degree of protection of IP66.
- Cables entering the enclosure shall be suitable for use in temperatures of up to at least 81°C.
- Only qualified personnel may install the product.
- Observe the locally applicable safety standards and safety regulations.
- During assembling, make sure the light fitting is not subjected to mechanical stress.
  If excessive tension is applied to the mounting feet during or after installation, such as when it is mounted on an uneven surface, the mounting feet's spot welds can be broken off from the light fitting.
- Use all the mounting holes when installing the light fitting.
- Ensure that the cable gland used is suitable for the dimensions and type of cable to be connected. This is necessary, otherwise the IP protection cannot be guaranteed.
- Ensure that the cable gland used has an IP degree of protection that is equal to or higher than IP66 in accordance with EN 60529.
- When using metal glands, use an earthing plate and lock nut on the inside of the junction box.
- Ensure there is a reliable connection to the earthing system, both with the external earthing point and with the connection in the light fitting junction box.
- Never open the light fitting's housing.
- Do not clean the light fitting with a high-pressure stem or water jet. This will avoid damage that is not covered by the warranty. Only clean with a damp cloth

2. Warranty

2.1 General

The ILED® Lyra Marine Light 3NM or 5NM U-code, or Obstruction luminaires have a standard warranty period. This warranty is only valid when the light fitting is used within the operating limits.

The operating limits are:

- The minimum and maximum ambient temperature is -40°C to +55°C.
- The light fitting must be installed by qualified personnel according to the installation instructions.
- Damage caused by incorrect installation, accidents or external influences, such as a lightning strike or harmonic distortion not within EN 50055, are not covered by the warranty.
- The light fitting's lighting level depends on the temperature and is, therefore, not covered by the warranty

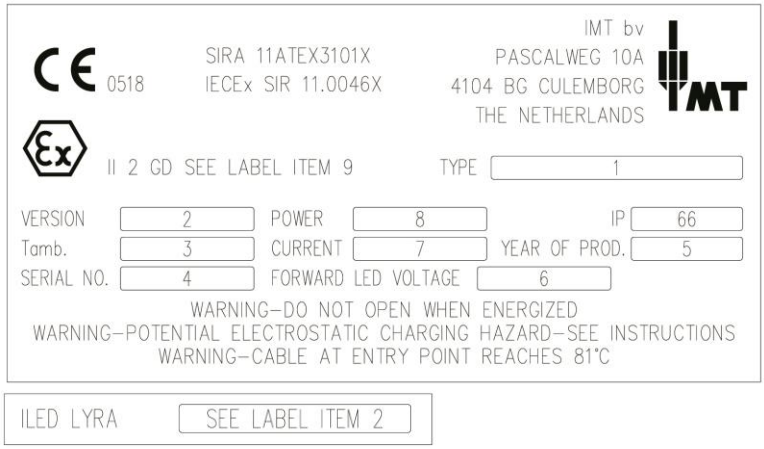
If an ILED® Lyra Marine Light 3NM or 5NM U-code or Obstruction light fitting fails within the warranty period, IMT B.V. will provide a new light fitting with similar specifications free of charge. Before it can be confirmed that the damage is covered by the warranty, the defective light fitting must be sent to IMT B.V. at the user's expense for inspection. The user will be informed of the result(s) of the inspection. For individual warranty agreements see invoice.

2.2 Life span

Switching the light fitting with a semiconductor photoelectric cell or semiconductor relay has no consequences for the life span of the light fitting. Allowing a light fitting to 'flash' that is adjusted standard as a steady burning light fitting, by means of a semiconductor photoelectric cell or semiconductor relay has, however, a negative effect on the life time.

3. Type plate

3.1 The light fitting has a type plate:

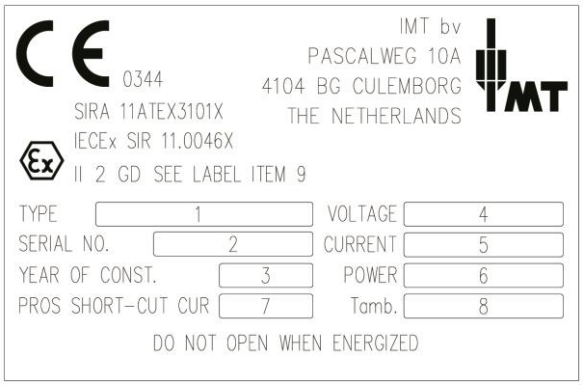


1. Type : ILED® Lyra 5NM
   ILED® Lyra 3NM
   ILED® Lyra Obstruction
2. Version : U-code
   Obstruction
3. Ambient temp. : -40°C tot +55°C
4. Serial number
5. Year of construction
6. Forward LED voltage : Max. 48Vdc
7. Current I_led Max : Max 450mA, 56mm height
8. Power : Max 22W
9. Marking : Ex e IIC T4 Gb
   : Ex tb IIIC T135°C Db

Attention
The current and power consumption depends on the purpose of the light fitting. For this reason the indicated values in the table can be different, but never more than the maximum value.

Attention.
Above mentioned information concerns the fixture. For connections of the driver see label on driver.

3.2 The junction box has a type plate:



1.	Type	: ILED ULD35W DC IN GRP JB : ILED ULD35W AC IN GRP JB : ILED ULD35W DC IN SS JB : ILED ULD35W AC IN SS JB
2.	Serial number	:
3.	Year of production	:
4.	Voltage	: DC: 24Vdc±10% : AC: 90-250Vac
5.	Current	: DC: Max 2.34A : AC: Max 0.49A
6.	Power	: Max 40W
7.	Pros. Short-Cut Current	: 200A
8.	Ambient temp.	: -40°C tot +55°C
9.	Marking	: EX e mb IIC T4 Gb : Ex tb IIIC T135°C Db IP66

Attention
The current and power consumption depends on the purpose of the light fitting. For this reason the indicated values in the table can be different, but never more than the maximum value.

4. Product Description

The ILED® Lyra Marine Light 3NM or 5NM U-code lighting fixture or Obstruction Light is designed for use in demanding surroundings.
Features of the ILED® Lyra fixture:

- High quality materials
- Sealed for life
- Vibration-proof.
- Based on ILED® technology.

5. Specifications

5.1 General

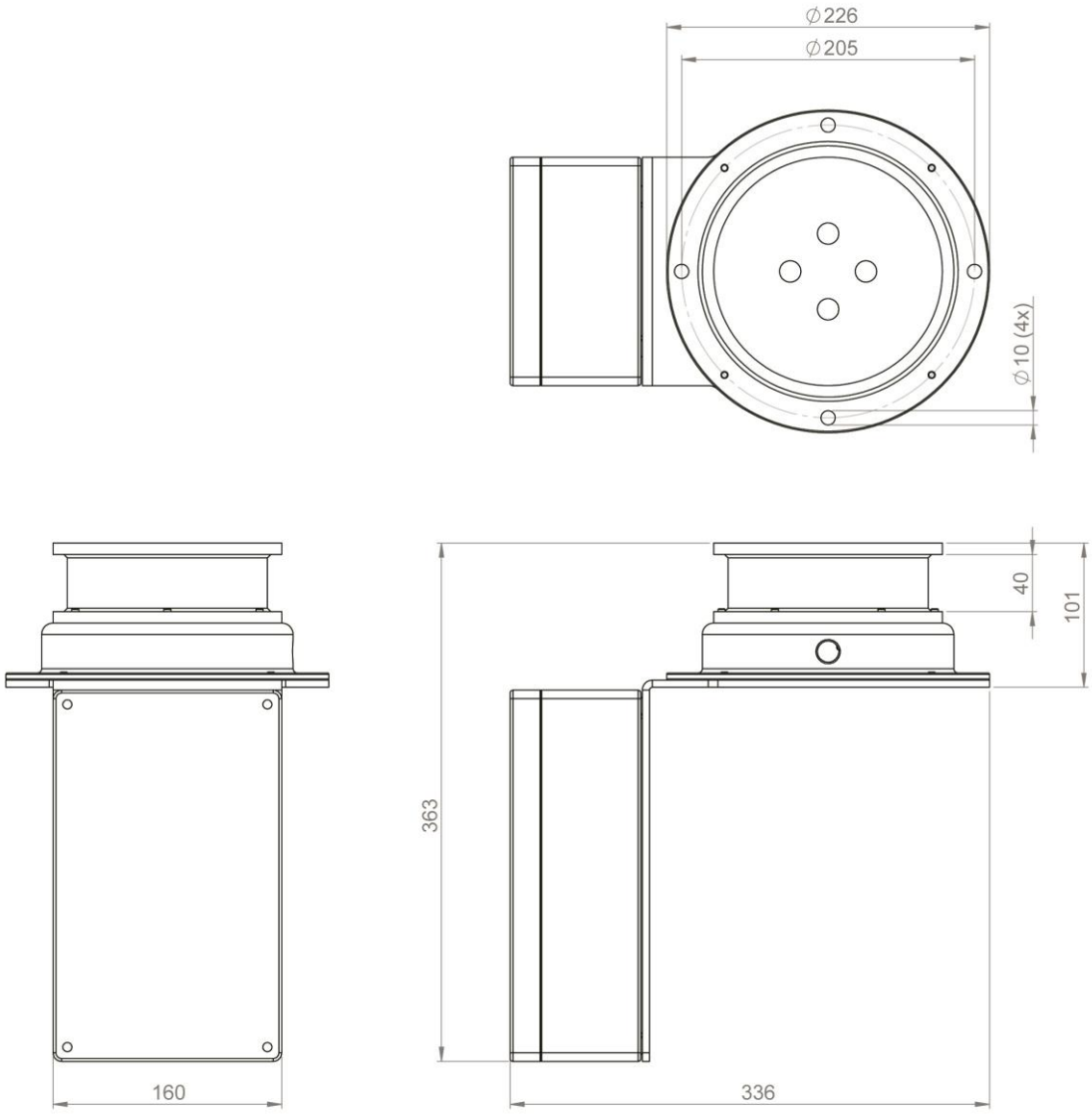
Housing	: Marine grade aluminum anodized
Lens	: Toughened borosilicate glass
Illumination Color	: Red according to ICAO Annex 14 Vol. 1 Appendix 1
Mechanical protection	: IP66
Input main voltage	: 90-250Vac 50/60Hz or 24Vdc ±10%
Burning position	: Horizontal
(Re)ignition	: Instant
Power factor	: >0,9
Connection	: Fitted as standard with junction box, suitable for a single-phase connection

Options

The following options are available for the ILED® Lyra Marine / Obstruction light fittings:

- AC Multi voltage
- DC 24V

5.2 Dimensions



6. Installation

6.1 Preparation

1. Check whether the light fitting is to be installed in an environment that meets the ambient temperatures, gas group and temperature class. This data is included on the light fitting type plate.

WARNING
Installation of a light fitting in an environment that does not meet the specified ambient temperatures may have a negative effect on the life time of the light fitting.

2. Choose the correct type of protection for the light fitting. When doing so, ensure:
   a. The choice of cut-off current for the safety device is suitable for the expected nominal current. This depends on the number of light fittings that are connected.
   b. The safety device's cut-off power is suitable for the maximum short-circuit current that the mains power supply can provide.

6.2 Assembly

1. Remove the light fitting from the packaging.
2. Inspect the light fitting for mechanical damage.

WARNING
Installation of a light fitting in an environment that does not meet the specified ambient temperatures may have a negative effect on the life time of the light fitting.

3. Mount the light fitting to the construction.
   - Ensure a reliable connection to the earthing system, both with the external earthing point and with the connection in the light fitting junction box.
   - Take precautions to prevent corroding of the earth connection, to ensure its functionality.
4. Ensure that the cable glands used are suitable for the dimensions and type of cable to be connected, to guarantee the IP class, and in case of an explosion proof lighting fixture the glands are Ex certified as follows: Ex e IIC T4 Gb and Ex tb IIIC T135C Db IP66 (Atex II 2 GD) by IEC 60079-0:2007 Ed5, IEC 60079-7 Ed 4, IEC 60079-31:2008 Ed 1.
5. The chosen gland for the fixture has a thread of M12 x 1.5mm. This gland is already provided with the cable of type Jobarco PUR flex TPE guaranteed up to at least 81 °C by your manufacturer.

WARNING
Clean fixture only with damp cloth.

6. The mounting plate with junction box can be mounted either with the junction box upwards, or downwards.

WARNING
During assembly, make sure the light fitting is not subjected to mechanical stress.

7. Cable glands and plugs shall be installed according to the instructions of the manufacturer, and shall not invalidate the specific characteristics of the type of protection of the electrical equipment on which they are mounted.
   - The cable entries for the junction box are M20 x 1.5mm or M25 x 1.5mm.
   - The cable glands for the junction box should be chosen in accordance to the selected cable, to ensure a guarantee of insulation of the gland and preventing the cable of transmitting pulling or twisting forces to the terminals in the junction box.
   - Plugs, intended to close unused openings in the junction box, shall satisfy the required protection and IP class, and shall only be mounted or removed with the aid of a tool.
   - Cable glands and blanking plugs may only be tightened or released during installation with a proper tools and forces as indicated by the manufacturer.
   - Cables shall be stripped according to the instructions of the manufacturer with the appropriate tools to guarantee the functional properties of the cable and IP degree.
   - A wire sleeve shall be positioned to the bare wire ends suitable for the quadratic wire diameter and placed with a specified tool according to the instructions of the manufacturer.

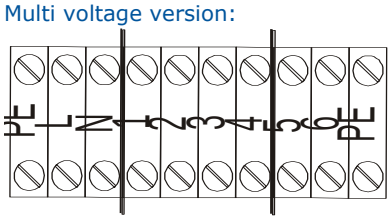
8. Connect the cable to the terminals.
   - The standard terminals for the supply in the junction box are suitable for a core diameter of 0-10 mm².
   - The standard connecting terminals for the communication are suitable for a core diameter of 0-4 mm².
   - Terminals shall be installed and tightened with appropriate tools according to the installation instructions of the manufacturer. The placement and assembly will be done in such a way that the degree of protection and safety of the device is guaranteed.
9. Check the completed connections.
10. Close the junction box.

6.3 Connections

The terminal block design depends on the product type purchased.

In the junction box is a standard terminal block as illustrated below:

Multi voltage version:



The following connections can be made:
L, N and PE : Connection for the power (For 24Vdc version L = + and N = -)
1 and 2 : Connection : DC output 1 (LED current source)
3 and 4 : Connection : Not Connected
5 and 6 : Option : Connection for local network (LAN)

Warning
Swapping over + and – *can* damage the luminary
Swapping over 1 and 2 *can* damage the luminary
Swapping over 3 and 4 *can* damage the luminary
Swapping over 5 and 6 *can* damage the luminary

Junction box with driver and terminal block.

WARNING
If metal cable glands or blind plugs are used, an earthing plate must be used in the junction box.

7. Use

7.1 Commissioning

The light fitting may be switched on directly after installation

7.2 Switches and Controls

The light fitting can be equipped with a communication connection (option : see "connections"). It is possible to set several factory settings using special software.
For switching on, off and controlling the light fitting there is a control unit available (IMT-LED-MASTER). This control unit is connected with the communication connections in the light fitting.

WARNING
It has a strong negative effect on the lifetime of the lighting fixture to get a flashing function by switching the power supply.

7.3 Insulation test

Installations in which ILED® Lyra Marine / Obstruction light fittings are mounted may be tested with an insulation test.
For this test, apply a maximum of 500 Vdc between earth and phase **or** neutral, or between the earth and the plus and minus of the 24Vdc version **together**, or between the earth and both of the network connections **together**.

WARNING
Never apply 500Vdc between phase and neutral, or between the plus and minus of the led fixture or between the network connections themselves.

All light fittings have undergone a dielectric test during production (24Vdc version: 700Vdc during 60 seconds, Multi voltage version: 2100 Vdc during 60 seconds). In addition, the light fittings have also been subjected to an endurance test.

8. Maintenance

The lighting fixture is `sealed for life' and therefore cannot be opened. Because of this, maintenance as defined in the IEC 60079-17 standard, is not applicable and visual inspection only for correct functioning is sufficient.

WARNING
Opening the light fitting voids all claims under guarantee.

Only clean with a damp cloth.

9. Recycling

Agreements have been made with local authorities for the recycling of the light fittings within the framework of the WEEE (Waste Electrical and Electronic Equipment Directive)
We refer to *your* local partner (see 'Contact details'). The local partner will take care of further disposal

10. Contact details

IMT B.V.
Pascalweg 10a, 4104 BG Culemborg
P.O. Box 88, 4100 AB Culemborg
THE NETHERLANDS
Phone : +31 (0)88 – 12 69 100
Fax : +31 (0)88 – 12 69 101
E-mail : sales@imt.eu

For an up-to-date overview of all national and international contacts, visit our website: www.imt.eu.

11. EU Declaration of Conformity

The undersigned, representing the company

IMT B.V.

declares that the product; **ILED® Lyra Marine Light 3NM / 5NM U-code and Obstruction Light** fittings marked with Ex II 2 GD Ex e IIC T4 Gb or Ex II 2 GD Ex tb IIIC T135°C Db complies with the provisions of the EU directive(s) - including all supplements.

94/9/EC	Equipment and protective systems intended for use in potentially explosive atmospheres
2004/108/EC	Electromagnetic Compatibility

and that provisions have been made in all standards and/or technically related specifications below.

Standard	Issue	Title
EN 60079-0	2006	Electrical apparatus for potentially explosive atmospheres General requirements
EN 60079-7	2003	Electrical apparatus for potentially explosive atmospheres Increased safety "e"
EN 60079-18	2004	Electrical apparatus for potentially explosive atmospheres Encapsulation "m"
EN 50281-1-1	1998	Electrical apparatus for use in the presence or combustible dust part 1-1: Electrical apparatus protected by enclosures - construction and testing.
EN 61547	2001	Equipment for general lighting purposes. EMC immunity requirements
EN 61000-3-2	2006	Limits for harmonic current emissions (equipment input current up to and including 16A per phase),

EC type certificate number: SIRA 11ATEX3101X
IECEx SIR 11.0046X

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